Applicant: Charles P. McShane et al.

Serial No.: 10/619,893 Filed: July 15, 2003

Page : 2 of 8

Attorney's Docket No.: 08215-301003 / P06-023937

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-132. (canceled).

133. (Previously Presented) A transformer including a housing that contains a transformer core/coil assembly, comprising:

a dielectric fluid surrounding said core-coil assembly, wherein the dielectric fluid consists of one or more vegetable oils and one or more antioxidant compounds, and wherein the one or more vegetable oils have a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C, and wherein the dielectric fluid is environmentally safe.

- 134. (Previously Presented) The transformer of claim 133, wherein the one or more antioxidant compounds are selected from the group consisting of butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT), tertiary butylhydroxyquinone (TBHQ), tetrahydroxybutrophenone (THBP), ascorbyl palmitate, propyl gallate and alpha-, beta- or delta-tocopherol.
 - 135. (Canceled)
- 136. (Previously Presented) A transformer including a tank housing a transformer core/coil assembly, comprising:
- a dielectric fluid surrounding said core-coil assembly, wherein the dielectric fluid consists of one or more oleate modified vegetable oils and one or more antioxidant compounds, and wherein the one or more vegetable oils have a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C, and wherein the dielectric fluid is environmentally safe.
- 137. (Previously Presented) The transformer of claim 136, wherein the one or more antioxidant compounds are selected from the group consisting of butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT), tertiary butylhydroxyquinone (TBHQ),

Applicant: Charles P. McShane et al. Attorney's Docket No.: 08215-301003 / P06-023937

Serial No.: 10/619,893 Filed: July 15, 2003

Page: 3 of 8

tetrahydroxybutrophenone (THBP), ascorbyl palmitate, propyl gallate and alpha-,beta- or delta-tocopherol.

138. (Canceled)

139. (Previously Presented) A transformer including a tank housing a transformer core/coil assembly, comprising:

a dielectric fluid surrounding said core-coil assembly, wherein the dielectric fluid consists of a base oil and additives that increase the functional properties of the base oil, the base oil consisting of one or more vegetable oils having a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C, and the additives selected from the group consisting of one or more antioxidant compounds, a low temperature additive and an antimicrobial additive.

- 140. (Previously Presented) The transformer of claim 139, wherein the one or more antioxidant compounds are selected from the group consisting of butylated hydroxyanisole. (BHA), butylated hydroxytoluene (BHT), tertiary butylhydroxyquinone (TBHQ), tetrahydroxybutrophenone (THBP), ascorbyl palmitate, propyl gallate and alpha-, beta- or delta-tocopherol.
 - 141. (Canceled)
- 142. (Previously Presented) A transformer including a housing that contains a transformer core/coil assembly, comprising:

a dielectric fluid surrounding said core-coil assembly, wherein the dielectric fluid consists of one or more vegetable oils with a viscosity of between 2 and 15 cSt at 100°C, and less than 110 cSt at 40°C and one or more antioxidant compounds; and wherein the dielectric fluid has: (a) a minimum dielectric breakdown of greater than or equal to 30 kV; (b) a fire point of greater than 300°C; and (c) a pour point between -15 and -25°C.

143. (Previously Presented) The transformer of claim 142, wherein the one or more antioxidant compounds are selected from the group consisting of butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT), tertiary butylhydroxyquinone (TBHQ), tetrahydroxybutrophenone (THBP), ascorbyl palmitate, propyl gallate and alpha-, beta- or delta-tocopherol.

Applicant: Charles P. McShane et al. Attorney's Docket No.: 08215-301003 / P06-023937

Serial No.: 10/619,893 Filed: July 15, 2003

Page : 4 of 8

144. (Canceled)

145. (Previously Presented) The transformer of claim 142, wherein the one or more vegetable oils are oleate modified vegetable oils.

146-153. (Canceled)

- 154. (Previously Presented) A method of using a transformer including a housing that contains a transformer core/coil assembly, comprising: employing in the transformer a dielectric fluid surrounding said core-coil assembly, wherein the dielectric fluid consists of a base oil and additives that increase the functional properties of the base oil, the base oil consisting of one or more vegetable oils having a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C, and the additives selected from the group consisting of one or more antioxidant compounds, a low temperature additive and an antimicrobial additive.
- 155. (Previously Presented) The method of claim 154, wherein the one or more antioxidant compounds are selected from the group consisting of butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT), tertiary butylhydroxyquinone (TBHQ), tetrahydroxybutrophenone (THBP), ascorbyl palmitate, propyl gallate and alpha-, beta- or deltatocopherol.
 - 156. (Canceled)
- 157. (Previously Presented) A method of using a transformer, comprising employing in the transformer a dielectric fluid, the dielectric fluid consisting of one or more vegetable oils and one or more antioxidant compounds, wherein the one or more vegetable oils has have a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C, and wherein the dielectric fluid is environmentally safe.
- 158. (Previously Presented) The method of claim 157, wherein the one or more antioxidant compounds are selected from the group consisting of butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT), tertiary butylhydroxyquinone (TBHQ), tetrahydroxybutrophenone (THBP), ascorbyl palmitate, propyl gallate and alpha-, beta- or delta-tocopherol.
 - 159. (Canceled)

Attorney's Docket No.: 08215-301003 / P06-023937

Applicant: Charles P. McShane et al.

Serial No.: 10/619,893 Filed: July 15, 2003

Page : 5 of 8

160. (Previously Presented) A method of using a transformer, comprising employing in the transformer a dielectric fluid, the dielectric fluid consisting of one or more oleate modified vegetable oils and one or more antioxidant compounds, wherein the one or more vegetable oils have a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C, and wherein the dielectric fluid is environmentally safe.

161. (Previously Presented) The method of claim 160, wherein the one or more antioxidant compounds are selected from the group consisting of butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT), tertiary butylhydroxyquinone (TBHQ), tetrahydroxybutrophenone (THBP), ascorbyl palmitate, propyl gallate and alpha-, beta- or delta-tocopherol.

162-174. (Canceled)

175. (Previously Presented) A transformer including a housing that contains a transformer core/coil assembly, comprising:

a dielectric fluid surrounding said core-coil assembly, wherein the dielectric fluid consists of one or more vegetable oils and one or more antioxidant compounds, and wherein the one or more vegetable oils have a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C.

176. (Previously Presented) The transformer of claim 175, wherein the one or more antioxidant compounds are selected from the group consisting of butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT), tertiary butylhydroxyquinone (TBHQ), tetrahydroxybutrophenone (THBP), ascorbyl palmitate, propyl gallate and alpha-, beta- or delta-tocopherol.

177. (Canceled)

178 (Previously Presented) The transformer of claim 175, wherein the one or more vegetable oils are oleate modified vegetable oils.

179. (Previously Presented) A method of retrofilling a transformer, comprising removing an existing dielectric fluid from the transformer and replacing the existing dielectric fluid with a dielectric fluid consisting of one or more vegetable oils and one or more antioxidant

Applicant: Charles P. McShane et al.

Serial No.: 10/619,893 Filed: July 15, 2003

Page : 6 of 8

Attorney's Docket No.: 08215-301003 / P06-023937

compounds, wherein the one or more vegetable oils have a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C.

- 180. (Previously Presented) The method of claim 179, wherein the one or more antioxidant compounds are selected from the group consisting of butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT), tertiary butylhydroxyquinone (TBHQ), tetrahydroxybutrophenone (THBP), ascorbyl palmitate, propyl gallate and alpha-, beta- or delta-tocopherol.
 - 181. (Canceled)
- 182. (Previously Presented) The method of claim 179, wherein the vegetable oils are cleate modified vegetable oils.
- 183. (Previously Presented) A transformer including a housing that contains a core/coil assembly, comprising:

a dielectric fluid surrounding said core/coil assembly, wherein the dielectric fluid consists of one or more vegetable oils, one or more antioxidant compounds and a low temperature additive, wherein the vegetable oils have a viscosity of between 2 and 15 cSt at 100°C and less than 100 cSt at 40°C, and wherein the dielectric fluid is environmentally safe.

- 184. (Previously Presented) The transformer of claim 183, wherein the vegetable oils are cleate modified vegetable oils.
 - 185. (Canceled)
- 186. (New) A transformer including a housing that contains a transformer core/coil assembly, comprising:

a dielectric fluid surrounding said core-coil assembly, wherein the dielectric fluid consists of one or more vegetable oils, one or more antioxidant compounds, and at least one of a low temperature additive and an antimicrobial additive, and wherein the one or more vegetable oils have a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C, and wherein the dielectric fluid is environmentally safe.

187. (New) The transformer of claim 186, wherein the one or more antioxidant compounds are selected from the group consisting of butylated hydroxyanisole (BHA), butylated

Applicant: Charles P. McShane et al.

Serial No.: 10/619,893 Filed: July 15, 2003

Page : 7 of 8

Attorney's Docket No.: 08215-301003 / P06-023937

hydroxytoluene (BHT), tertiary butylhydroxyquinone (TBHQ), tetrahydroxybutrophenone (THBP), ascorbyl palmitate, propyl gallate and alpha-, beta- or delta-tocopherol.

188. (New) A transformer including a tank housing a transformer core/coil assembly, comprising:

a dielectric fluid surrounding said core-coil assembly, wherein the dielectric fluid consists of one or more oleate modified vegetable oils, one or more antioxidant compounds, and at least one of a low temperature additive and an antimicrobial additive, and wherein the one or more vegetable oils have a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C, and wherein the dielectric fluid is environmentally safe.

- 189. (New) The transformer of claim 188, wherein the one or more antioxidant compounds are selected from the group consisting of butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT), tertiary butylhydroxyquinone (TBHQ), tetrahydroxybutrophenone (THBP), ascorbyl palmitate, propyl gallate and alpha-,beta- or delta-tocopherol.
- 190. (New) A method of retrofilling a transformer, comprising removing an existing dielectric fluid from the transformer and replacing the existing dielectric fluid with a dielectric fluid consisting of one or more vegetable oils, one or more antioxidant compounds, and at least one of a low temperature additive and an antimicrobial additive, and wherein the one or more vegetable oils have a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C.
- 191. (New) A method of retrofilling a transformer, comprising removing an existing dielectric fluid from the transformer and replacing the existing dielectric fluid with a dielectric fluid consisting of one or more oleate modified vegetable oils, one or more antioxidant compounds, and at least one of a low temperature additive and an antimicrobial additive, and wherein the one or more vegetable oils have a viscosity of between 2 and 15 cSt at 100°C and less than 110 cSt at 40°C.